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## Hope for CIRM leukemia disease team

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The clock is ticking on the 14 CIRM Disease Team projects issued last October, which are working under a four-year deadline to hit the clinic. The \$20 million acute myeloid leukemia project headed up by Irv Weissman of Stanford University just reported some promising progress.

Weissman and his team are developing a chemotherapy drug that binds to a protein found on leukemia stem cells, killing the cells. The protein, called CD47, is also found on other cancer stem cells.

The work, which was published in the Sept. 3 issue of *Cell*, was focused on non-Hodgkins lymphoma. The group gave mice with non-hodgkins lymphoma the molecule that blocks CD47 in addition to another antibody, and cured the disease in 60 percent of cases.

According to a Stanford press release:

“ The researchers point out that, although the CIRM grant focuses on investigating anti-CD47 therapies for acute myeloid leukemia, the drug development process will result in an antibody that could also be used for other cancers. They focused their preliminary investigations on non-Hodgkin's lymphoma because they were curious as to how the anti-CD47 antibody would work with rituximab, which also binds to human lymphoma cells.

The release goes on to say that the researchers hope to try the therapy in other cancers:

“ The researchers are moving forward to conduct tests on other CD47-expressing cancer cells, which include acute leukemia, bladder and several other cancer stem cells. They speculate that they might see a similar synergistic effect between anti-CD47 and other cancer-specific monoclonal antibodies currently in clinical use. They are also moving ahead as quickly as possible to bring the anti-CD47 antibody treatment to trials in human patients.

Recently, CIRM disease teams targeting brain tumors (blogged about here) and HIV/AIDS (blogged about here) have also had some preliminary success.

You can learn more about the CIRM disease team program in our October press release.

If you aren't familiar with cancer stem cells, here's a video with Catriona Jameison, a cancer stem cell scientist at University of California, San Diego, talking about their role in cancer.

A.A.

**Tags:** Disease Team, Cancer, Stanford University, leukemia, Weissman

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